National Analytical Management Program (NAMP)
U.S. Department of Energy Carlsbad Field Office

TRAINING AND EDUCATION SUBCOMMITTEE

Radiochemistry Webinars

Actinide Chemistry Series

NAMP invites you to attend web-based lectures on specific radiochemistry topics developed in cooperation with the EPA and university partners. The Actinide Chemistry Series offers the participant a comprehensive overview on the different topics of interest and concern, and provides understanding of the advances and challenges that actinide chemistry faces today. The selected topics are designed to strengthen the participant in areas of professional engineering practice identified by the nuclear industry or national laboratories, including but not limited to actinide chemistry in the environment and in the nuclear fuel cycle. The series presents short (1 ½- to 2-hour) webinars on specific radiochemistry topics presented by renowned university professors and leading scientists in radiochemistry.

***REGISTER NOW* to attend the next webinar presented in this series:**

Analytical Chemistry Uranium and Plutonium

Who Should Attend: **Laboratory technicians** **Chemists** **Geochemists** **Regulators** **Managers**

Webcast: Thursday, October 11, 2012, at 1:00 pm Eastern Time, 12:00 pm Central Time

Lecture Overview: This webinar will provide a basic understanding of the fundamental analytical chemistry of uranium and plutonium. Particular emphasis will be placed on a variety of radioanalytical techniques for the determination of these elements and how their chemical behavior governs the separation behavior. The general principles of separations utilizing ion exchange, extraction chromatography and solvent extraction will be discussed and examples of common analytical procedures will be given.

Register free to attend at: https://foodshield.connectsolutions.com/analyticalchemistry/event/event_info.html

For more information, please visit the NAMP website at http://www.inl.gov/namp or contact: Berta Oates at boates@portageinc.com

Meet the Presenter…

Ralf Sudowe

Dr. Ralf Sudowe has extensive experience in the area of nuclear and radiochemistry, particularly in the development of radioanalytical separations for actinide and transactinide elements, as well as fission products. He is currently an Associate Professor of Health Physics and Radiochemistry at the University of Nevada Las Vegas. He received a M.S. degree in Chemistry from the Philipps-University Marburg in Germany in 1995, and a Ph.D. in Nuclear Chemistry from the same institution in 1999. Dr. Sudowe spent two years as Visiting Postdoctoral Fellow in the Nuclear Science Division at Lawrence Berkeley National Laboratory and then worked for five years as Staff Scientist in the Nuclear Science and Chemical Sciences Division at LBNL before joining the faculty at UNLV in 2006. He is a member of the American Chemical Society, the American Nuclear Society, and the Health Physics Society.

At UNLV, Dr. Sudowe teaches courses in radioanalytical chemistry, radiation detection, environmental health physics and radiation biology, as well as laboratory courses in radiochemistry and radiation detection instrumentation. His research focuses on the development and optimization of advanced radioanalytical methods for environmental monitoring, nuclear forensics and safeguards, and emergency response. The goal is to make radioanalytical methods available that have lower detection limits for the radionuclides of interest, facilitate the fast analysis of a large number of samples, and allow assay of unusual sample matrices such as urban rubble and process streams. The research utilizes a variety of modern analytical tools to obtain a better understanding of the fundamental properties of the separation process and to elucidate the role that interfering elements have on the technique. In addition, Dr. Sudowe studies the chemical and nuclear properties of transactinide elements and is involved in target preparation and cross section measurements for stockpile stewardship science.

Future Topics in the Actinide Chemistry Series

- Source Preparation for Alpha Spectroscopy
- Sample Dissolution
- Neptunium Chemistry